Bobcat Population Analyses
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Abstract

Age and reproductive data obtained from 2,527 bobcats harvested during the 1983-2001 seasons were used to evaluate Wisconsin's bobcat population. Analyses suggested that fall population sizes have fluctuated between 1,500 and 2,600 since 1983.

Methods

Successful hunters and trappers were required to register their bobcat at a DNR station and turn in the carcass at that time. The sex, date of harvest, and county of harvest were recorded for each carcass. A canine tooth was extracted and sent to Matson's Lab, Milltown, MT for processing and aging (determined by counting annuli in the cementum). Ovaries and uteri were removed from all female carcasses. Uteri were then examined for the presence/numbers of placental scars and ovaries were examined for corpora lutea. Bobcat population estimates and trends were determined by incorporating these data into Minnesota's Furbearer Population Model.

Results

Biological samples were obtained from 162 (84 males; 78 females) bobcats harvested during the 2002 season. Age information from those carcasses are not yet available. Data from the carcasses collected since 1983 are summarized in Tables 1 and 2.

Kits averaged 27% of the bobcats harvested during 1983-2001, yearlings 24%, and adults 49% (Table 1). Examination of 771 female reproductive tracts showed mean pregnancy rates of 38% for yearlings and 72% for adults. The mean number of placental scars per pregnancy was 2.8 (Table 2).

Harvest, age, and reproduction data were incorporated into the Minnesota Furbearer Population Model. Analyses suggest that the fall bobcat population in northern Wisconsin fluctuated between 1,500 and 2,600 during 1983-2002 (Fig. 1). Conservative harvests since 1988 have permitted steady population growth, except in 1993 when poor reproduction reduced the population to about 1,500. Winter track count surveys (Dhuey 2002) generally supported population trends suggested by the model. Three year mean numbers of bobcat tracks observed per transect have increased substantially since 1993.

The fall population estimate for the portion of Wisconsin north of State Highway 64 for 2003 is approximately 2,590. The WDNR Furbearer Advisory Committee recommended a harvest of 290 bobcats for the 2003 season. That harvest level should stabilize the bobcat population at its current level.

Table 1. *Ages of bobcats harvested in Wisconsin, 1983-2001.*

Year	No. Aged	Percent in age class						
		Kits	1	2	3	4	5	6+
1983	84	23.8	31.0	14.3	13.1	6.0	3.6	8.3
1984	97	25.8	25.8	10.3	13.4	13.4	6.2	5.2
1985	168	32.1	30.4	10.7	7.1	5.4	7.1	7.1
1986	158	27.9	27.9	11.4	7.0	8.2	4.4	13.3
1987	221	31.7	26.7	16.7	10.4	3.6	2.3	8.6
1988	127	34.7	30.7	10.2	8.7	4.7	3.2	7.9
1989	103	23.3	26.2	17.5	12.6	9.7	3.9	6.8
1990	86	44.2	23.3	15.1	7.0	3.5	2.3	4.6
1991	57	26.3	28.1	24.6	12.3	7.0	0.0	1.8
1992	181	21.6	28.2	16.6	9.9	9.4	6.6	7.7
1993	131	24.4	22.9	16.8	19.8	3.8	7.6	4.6
1994	153	23.5	24.2	16.3	9.8	7.8	6.5	11.8
1995	79	21.5	19.0	13.9	12.7	6.3	11.4	15.2
1996	105	26.7	22.9	20.0	8.6	7.6	4.8	9.5
1997	139	23.7	18.0	22.3	10.8	10.8	5.0	9.4
1998	168	25.0	23.2	17.3	10.1	10.1	2.4	11.9
1999	145	31.7	14.5	15.9	13.8	10.3	6.9	6.9
2000	214	21.0	17.8	15.9	14.5	12.1	6.5	12.1
2001	111	15.3	17.1	26.1	23.4	7.2	3.6	7.2
All Years	2,527	26.5	24.0	16.1	11.6	7.9	5.1	8.8

Table 2. *Reproductive rates of female bobcats harvested in Wisconsin, 1983-2001.*

Year	No. of Carcasses	Pregnancy rates (%)		Mean number placental scars/preg.
		Yearlings	Adults	
1983	38	24	76	2.3
1984	25	11	56	2.5
1985	59	32	55	2.2
1986	46	33	71	2.6
1987	58	45	79	2.7
1988	28	75	94	3.1
1989	38	56	68	2.9
1990	24	27	69	3.0
1991	17	20	67	3.0
1992	57	38	72	2.4
1993	44	14	43	1.9
1994	39	27	71	2.9
1995	24	62	69	2.6
1996	31	67	92	2.9
1997	53	46	87	3.2
1998	49	29	78	2.6
1999	38	40	91	3.1
2000	68	44	71	3.3
2001	35	38	67	3.1
All Years	771	38	72	2.8

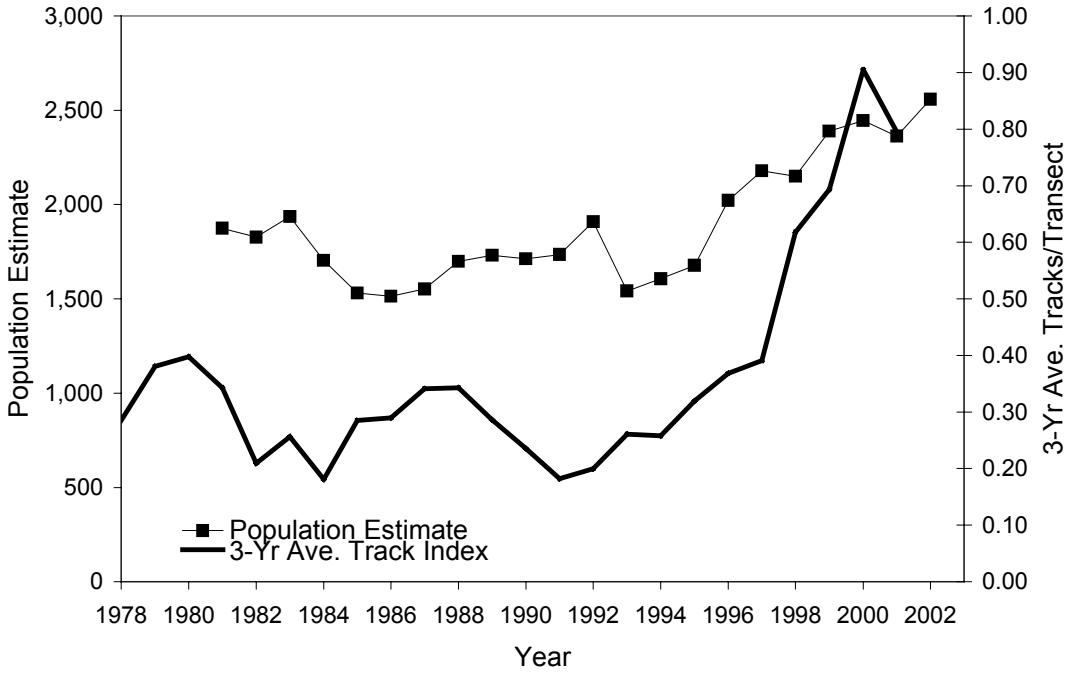

Figure 1. *Prehunt bobcat population estimates and 3-year mean numbers of bobcat tracks observed per transect in winter track surveys, 1978-2002.*